

# UNITED STATES PATENT OFFICE.

CHARLES A. LIEB, OF NEW YORK, N. Y.

## BINDING-POST.

SPECIFICATION forming part of Letters Patent No. 446,871, dated February 24, 1891.

Application filed September 19, 1890. Serial No. 365,499. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. LIEB, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Binding-Posts, of which the following is a specification.

My invention relates to improvements in binding-posts for electrical apparatus; and it consists, broadly stated, in a base piece or plug for the binding-post comprising a metallic central portion embedded in and rigidly attached to a body or mass of insulating material and one or more binding-screws arranged one above the other, the first one being threaded into the central metallic portion of the base and each succeeding binding-screw into the one below it, the several binding-screws being interchangeable.

My invention may also be used in part without the insulated plug.

My invention is an exceedingly effective and useful device, cheap in construction, finished in appearance, and adapted to use in a great variety of places in or about electrical machines or apparatus, and by its use I am enabled indefinitely to multiply connections one upon the other, because of the interchangeable nature of my binding-screws, and I entirely do away with the insulated connecting-plates heretofore in common use, which continually give trouble and annoyance by reason of their splitting, warping, &c., since by my invention I can attach the binding-post to any part of any machine or apparatus, whether it be wood or metal, by simply boring a hole therein and driving the base-plug, with its integral covering of insulating material, into the hole, and I can attach any number of wires to the same binding-post, thus carrying the current to as many places as I desire by means of the superposed binding-screws, and I also, if desired, can employ the superposed binding-screws without the plug—as, for instance, when I wish to make connection with any conductor of electricity direct, to the switch-board of a dynamo or telephone-station switch-board, for instance—and in this latter use my invention is specially valuable, because, owing to the interchangeability of my binding-screws, I can move them about upon the switch-

board, inserting them in any base-plug I desire or superposing them upon each other to an indefinite extent, as the change of connections may require, and I am enabled to do this speedily and without interfering with the services.

In the drawings hereof the same reference-letters indicate the same parts in all figures.

Figure 1 illustrates an elevation of my invention, there being no wires upon it, however. Fig. 2 illustrates a vertical section thereof, the binding-screws being run back as for the reception of wires. Fig. 3 illustrates an elevation of my superposed series of binding-screws used without the insulated plug, partly in section. Fig. 4 illustrates a plan of that which is shown in Fig. 3.

There are two binding-screws only shown in Figs. 1 and 2 and three in Figs. 3 and 4 of the drawings; but it is obvious that there may be one only or as many as desired, within, of course, practical limits.

A is the metallic center of the base-plug. B is a coating or body of insulating material molded, compressed, or otherwise formed about the metallic center. I prefer that this material should be hard rubber, but other suitable material may be employed; and I prefer to make recesses or corrugations C C in the metallic center, so that the insulating material may take a firm hold thereon and remain rigidly and permanently attached thereto. They are not essential, however; nor is it essential that the insulating material should be permanently attached to the metallic center.

D is a threaded hole tapped into the top of the metallic center A, and on its upper surface it is preferably flanged out laterally, so as to form a plate E, covering the upper side or edge of the insulating material.

F is one binding-screw. It is provided with a threaded spindle G, which screws into the hole D in the metallic part A, and a flange H and milled head I, all as usual, and there is a threaded hole J tapped into the center of the head I, into which the threaded spindle K of a second binding-screw L screws. This second binding-screw is provided with the usual flange M and head N, the same as the one first described, and has in like manner a threaded hole O in its head, so that another

(No Model.)

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BINDING POST.

No. 446,871.

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Fig. 1.

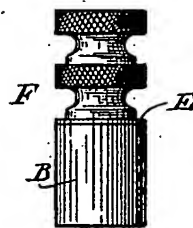


Fig. 3.

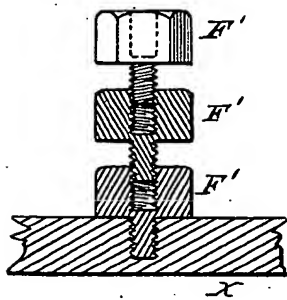


Fig. 4.

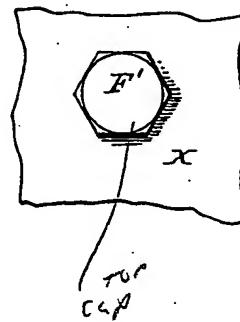
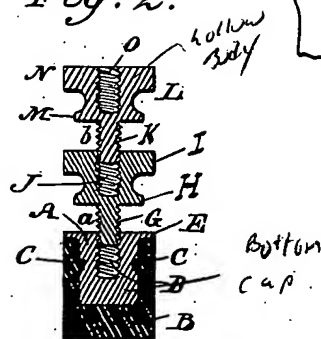


Fig. 2.



A - Bottom cap

WITNESSES:

Alfred Peterband  
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INVENTOR:

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binding-screw may in like manner be applied to it, if desired. It will be observed that the threaded spindles on the several binding-screws and the holes in their heads, respectively, and also the threaded hole in the base-plug, are all of them of the same size. Hence any binding-screw may be placed in any base-plug, and also an indefinite number of the binding-screws may be superposed on top of each other. It will of course be understood that the wires or terminals are placed in the recesses *a* and *b*, as usual, and clamped therein by running down the appropriate binding-screw firmly on it.

In Figs. 3 and 4 I show that part of my invention which consists in the superposed binding-screws used without the insulated plug. *X* indicates any suitable conductor of electricity—as, for instance, a switch-board. In these figures I show the binding-screws as having hexagonal heads to adapt them to manipulation by means of a wrench.

It is obvious that the shape of the base-plug and of the binding-screws may be such as preferred. I ordinarily prefer to make the base-plug round, since that is ordinarily the shape of the hole into which it will be driven; and it is also obvious that it is not absolutely essential under all circumstances that the base-plug should have a metallic center. I prefer it, however.

I claim—

1. A binding-post comprising, essentially, a base-plug having a metallic central part provided with a threaded hole and an exterior layer of insulating material, and a binding-screw having a threaded stem adapted to screw into the hole in the metallic part of the base-plug, substantially as set forth.
2. A binding-post having an insulated base-

plug provided with a threaded hole and a binding-screw provided with a threaded spindle adapted to screw into the hole in the base-plug, and also a threaded hole in the center of its head only adapted to receive the threaded spindle of another binding-screw, substantially as set forth.

3. An interchangeable multiple binding-post comprising, essentially, an insulated base-plug provided with a threaded hole in its upper part and a plurality of binding-screws superposed thereon, the spindle of the first of which enters the hole in the base-plug and the spindles of succeeding ones entering the threaded holes in the heads of those immediately below, all the spindles and all the holes being of the same size, substantially as set forth.

4. A binding-post comprising a plurality of binding-screws superposed upon each other, the upper one or ones having spindles which thread into holes in the heads only of the ones below, substantially as set forth.

5. An interchangeable multiple binding-post comprising, essentially, a plurality of binding-screws, each having a threaded spindle and a threaded hole in its head, all the spindles and all the holes being of the same size, substantially as set forth.

6. A binding-screw having a threaded spindle and a threaded hole in its head, the hole and spindle being of the same size, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 12th day of September, A. D. 1890.

CHARLES A. LIEB.

Witnesses:

PHILLIPS ABBOTT,  
FREDERICK SMITH.